THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.

Paper No. 37

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte TAKAHISA HARA, MASAHITO MATSUMOTO, NOBUHIRO USUI, and SHIGEYOSHI MATSUBARA

Appeal No. 1996-2637
Application No. 08/190,566[1]

ON BRIEF

Before METZ, PAK, and LIEBERMAN, Administrative Patent Judges.

PAK, Administrative Patent Judge.

DECISION ON APPEAL

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[1] Application for patent filed February 2, 1994. According to appellants, this application is a continuation of Application 07/873,893, filed April 24, 1992, now abandoned; which is a division of Application 07/545,868, filed June 29, 1990, now abandoned.

This is a decision on an appeal from the examiner's final rejection of claims 4 through 14 which are all of the claims pending in the application.

Claim 4 is representative of the subject matter on appeal and reads as follows:

4. A method for compression molding of a resin article comprising the steps of:

providing opposing male and female mold portions, the mold portions being movable between open and closed states;

introducing a resin material in a flowable state between the mold portions while the mold portions are in the open state;

moving the mold portions toward one another from the open state to the closed state;

spreading the resin material between the male mold portion and the female mold portion as the mold portions are moved to the closed state;

forcing air from a cavity between the male mold portion and female mold portions as the mold portions are moved to the closed state, the air being forced through a space between the male and female mold portions;

forming an annular mating gap between the male and female mold portions in the closed state, the annular mating gap being formed by a flange on the female mold portion which overhangs sidewalls of said male mold portion by a distance L in a mold closing direction forming a mating edge therewith when the molds are closed;

providing the distance L to satisfy the equation

$$(t_1 - t_0 + 10)\ mm \geq L \geq (t_1 - t_0)\ mm,$$

wherein:

t_1 is a distance in mm in the mold closing direction between the male and female mold portions when the resin material first reaches the mating edge of the male mold portion; and

t_0 is a distance in mm in the mold closing direction between the same points on the male and female mold portions as those used for measuring t_1, when the mold closing is complete; and

making width of the mating gap between the male and female mold portions from 0.02 to 0.1 mm.

The prior art references of record relied upon by the examiner are:

Bielfeldt	3,632,729	Jan. 4, 1972
Dannels et al. (Dannels)	4,309,379	Jan. 5, 1982
Takahashi	4,715,804	Dec. 29, 1987
Robin et al. (Robin) (Great Britain)	1,177,705	Jan. 14, 1970

Mafilios, "Designing molds to cut thermoset scrap," Plastic Engineering, pp. 35-38, (October 1984).

Sors et al. (Sors), "Design of Plastic Moulds and Dies," Studies in Polymer Science, Vol. 3, p. 17 (1989).

The appealed claims stand rejected as follows:

(1) Claims 4 through 11 and 14 under 35 U.S.C. § 102(b) as anticipated by the disclosure of Robin;

(2) Claims 12 and 13 under 35 U.S.C. § 103 as unpatentable over the disclosure of Robin;

(3) Claims 4 through 11, 13 and 14 under 35 U.S.C. § 103 as unpatentable over the combined disclosures of either Bielfeldt or Dannels and Mafilios; and

(4) Claims 4 through 14 under 35 U.S.C. § 103 as unpatentable over the combined disclosures of Takahashi and Sors.

We reverse each of the foregoing rejections.

We turn first to the examiner's § 102(b) rejection of claims 4 through 11 and 14 as anticipated by the disclosure of Robin. To anticipate the claimed subject matter under Section 102(b), Robin must disclose, either expressly or under the principles of inherency, each and every claim limitation. ***See In re Spada***, 911 F.2d 705, 708, 15 USPQ2d 1655, 1657 (Fed. Cir. 1990); ***RCA Corp. v. Applied Digital Data Sys., Inc.***, 730 F.2d 1440, 1444, 221 USPQ 385, 388 (Fed. Cir. 1984).

Here, the examiner refers to only some of the claimed limitations allegedly taught by Robin. See the Answer, page 5. The examiner, for example, refers to Robin's disclosure regarding the enlargement of the mold cavity by 0.01 inch and attempts to equate that distance with the claimed distance L.

Id. The examiner, however, does not explain why and how this disclosure satisfies the claimed distance L which is defined as a portion of a flange on a female mold portion, which overhangs sidewalls of a male mold portion. See Figure 3A of the instant application in conjunction with claim 4. Moreover, the examiner does not point to any teaching in Robin, which recognizes the importance of the relationship between the claimed t_1, t_0 and L as defined by the claimed equation $(t_1 - t_0 + 10)$ mm $\geq$ L $\geq$ $(t_1 - t_0)$ mm. See the Answer in its entirety. Nor does the examiner point to any teaching in Robin which describes the claimed distance L for a given mating gap width of 0.02 to 0.1 mm (the claimed width). See the Answer in its entirety. On this record, the examiner simply fails to demonstrate that Robin describes each and every claim limitation within the meaning of 35 U.S.C. § 102(b). ***In re Oetiker***, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992) ("the examiner bears the initial burden, on review of the prior art or on any other ground, of presenting a prima facie case of unpatentability"). Accordingly, we are constrained to reverse the examiner's

decision rejecting claims 4 through 11 and 14 under 35 U.S.C. § 102(b).

We turn next to the examiner's § 103 rejection of claims 12 and 13 as unpatentable over the disclosure of Robin. To establish obviousness under Section 103, the examiner must demonstrate that Robin as a whole would have fairly suggested to those of ordinary skill in the art the claimed subject matter. ***In re Young***, 927 F.2d 588, 591, 18 USPQ2d 1089, 1091 (Fed. Cir. 1991); ***In re Keller***, 642 F.2d 413, 425, 208 USPQ 871, 881 (CCPA 1981). The burden of producing the factual basis to support a Section 103 rejection rests on the examiner. ***In re Warner***, 379 F.2d 1011, 1017, 154 USPQ 173, 177-78 (CCPA 1967).

Here, the subject matter of claims 12 and 13 embraces all of the limitations recited in claim 4, including the claimed distance L (defined by the claimed equation) for a given mating gap width of 0.02 to 0.1 mm (claimed width). However, the examiner has not explained why it would have been obvious to employ the claimed distance L for the given claimed width in the method described in Robin. Accordingly, we are constrained to reverse this § 103 rejection as well.

We turn next to the examiner's § 103 rejection of claims 4 through 11, 13 and 14 as unpatentable over the combined disclosures of either Bielfeldt or Dannels and Mafilios. As found by the examiner at page 7 of the Answer, Mafilios does teach the importance of providing vents, including peripheral vents, in the mold used in a molding process, such as one disclosed by Bielfeldt or Dannels. Thus, we agree with the examiner that it would have been ***prima facie*** obvious to provide peripheral vents large enough to permit the escape of gases and volatiles, but small enough to prevent excessive bleeding of resin material, in the mold used in the molding process of Bielfeldt or Dannels.

However, the combination proposed by the examiner does not result in the claimed subject matter. We find that the applied prior art references do not teach, nor would have suggested, the claimed distance L for the given claimed mating gap width. Nowhere do the applied prior art references, for example, recognize the importance of the relationship between the claimed distances t_1, t_0 and L as defined by the claimed equation $(t_1 - t_0 + 10)$ mm $\geq$ L $\geq$ $(t_1 - t_0)$ mm. Nor do the

applied prior art references recognize the importance of using the claimed distance L for the claimed mating gap width.

The examiner refers to the drawings of both Bielfeldt and Dannels to show that both Bielfeldt and Dannels inherently employ the claimed distance L. See the Answer, page 7. The examiner measures distance "L" from the above-mentioned drawings through extrapolation. ***Id.*** However, we find that the measurement of the drawings in question are of little value since there is no indication that these drawings are drawn to scale. ***In re Chitayat***, 408 F.2d 475, 161 USPQ 224 (CCPA 1969)(arguments based on mere measurement of patent drawings are of little value in the absence of description in the specification of relative dimensions); ***In re Olson***, 212 F.2d 590, 592-93, 101 USPQ 401, 402-03 (CCPA 1954)(patent drawings are generally regarded as schematic drawings which are not drawn to scale and which have dimension not precisely defined). It then follows that the examiner has failed to establish a ***prima facie*** case of obviousness within the meaning of 35 U.S.C. § 103. Accordingly, we reverse the examiner's decision rejecting claims 4 through 11, 13 and 14 under 35

U.S.C. § 103 over the combined disclosures of either Bielfeldt or Dannels and Mafilios.

We turn next to the examiner's § 103 rejection of claims 4 through 14 as unpatentable over Takahashi and Sors. As indicated ***supra***, providing peripheral vents large enough to permit the escape of gases and volatile, but small enough to prevent excessive bleeding of resin material, in the mold used in the molding process of Takahashi would have been obvious to one of ordinary skill in the art. However, the combined teachings of the applied prior art references would not result in the claimed subject matter, for they do not teach, nor would have suggested the claimed distance L. Contrary to the examiner's finding at page 8 of the Answer, the gap (t_1-t) described in Takahashi does not suggest the claimed distance L which is defined as a portion of a flange on a female mold portion, which overhangs sidewalls of a male mold portion. Accordingly, we reverse this § 103 rejection as well.

In view of the foregoing, the decision of the examiner is reversed.

REVERSED

Andrew H. Metz	)	
Administrative Patent Judge	)	
	)	
	)	
	)	
Chung K. Pak	)	BOARD OF PATENT
Administrative Patent Judge	)	APPEALS AND
	)	INTERFERENCES
	)	
	)	
Paul Lieberman	)	
Administrative Patent Judge	)	

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BIRCH, STEWART, KOLASCH & BIRCH
P.O. Box 747
Falls Church, VA 22040-0747

CKP:tdl